APPENDIX F

21ST CENTURY ASSET MANAGEMENT: EXECUTIVE SUMMARY

Sponsored by the
American Association of State Highway and Transportation Officials
and the Federal Highway Administration
October, 1997

21st Century Asset Management

Executive Summary

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Prepared by the Center for Infrastructure
and Transportation Studies at
Rensselaer Polytechnic Institute

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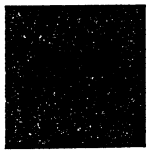

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foreword

In October 1997, the American Association of State Highway and Transportation Officials (AASHTO) and the Federal Highway Administration (FHWA) jointly sponsored a two-day executive workshop on asset management. The mission of the workshop was to evaluate current asset management practices, technologies, and tools, and to develop a strategy for moving forward a cooperative asset management initiative. The New York State Department of Transportation and Rensselaer Polytechnic Institute hosted the event, which brought together high-level officials from AASHTO, FHWA, and state transportation agencies, as well as directors of national organizations and professional associations, and representatives of the private sector and academia. This document summarizes the deliberations and findings of the workshop, and the recommendations made for moving this initiative forward.

The October 1997 workshop builds upon the findings of the earlier AASHTO/FHWA Executive Seminar on Asset Management held during September 1996 in Washington, D.C. During that initial event, participants drawn from the leadership of AASHTO, FHWA, state transportation departments, private industry, utility companies, quasi-government organizations, and research and supplier communities shared experience and expertise to improve the quality of asset management. The results are documented in the publication entitled, *"Asset Management: Advancing the State of the Art Into the 21st Century Through Public-Private Dialogue"* (USDOT Publication No. FHWA-RD-97-046), which describes the goals, attributes, and usefulness of asset management.

overview

Asset management is a systematic process of maintaining, upgrading, and operating physical assets cost-effectively. In the broadest sense, the assets of a transportation agency include physical infrastructure such as pavements, bridges, and airports, as well as human resources (personnel and knowledge), equipment and materials, and other items of value such as financial capacities, right-of-way, data, computer systems, methods, technologies, and partners. Each transportation agency has a unique inventory of assets, many with common attributes.

The practice of asset management:

- makes better and more objective information available to the decision making process;
- provides the critical ability to clearly demonstrate the implications of all investment alternatives;
- improves decision-making and enhances productivity, which translate into savings of time and money; and
- enables the agency to obtain maximum benefit from whatever level of funding the budget process provides.

Currently, most agencies are managing individual assets, but not many are taking a comprehensive view or evaluating all the trade-offs that must be made. Asset management allows agencies to broaden their approach by providing a framework for cost-effective decision-making and quality improvements. It also serves as an important process in short-range, long-range, and strategic planning.

Asset management is facilitated by tools that help decision-makers perform asset management effectively. Computerization and other enabling technologies (i.e., electronic sensors, robotics, GPS, satellites, etc.) are used to generate and provide ready access to quantitative and qualitative data on an organization's assets. General purpose and specialized resource allocation and optimization tools are available and can be used to conduct "what-if" analyses of current and future facility performance and needs. These analyses can be based on inventory, condition, and performance data; agency policies and long term plans; statutory guidance; available rules of thumb, and principles drawn from engineering, economics, accounting, risk management, customer service, and other sound business practices.

Asset management is more than an engineering tool. Asset management provides an opportunity for both horizontal and vertical integration within an agency, as it cuts across Finance, Planning, Engineering, Personnel, and Information Management. The team approach of bringing all these perspectives together is fundamental to achieving integrated asset management practice. All key organizations within an agency should be fully supportive participants of the working partnerships inherent in the asset management process.

There are numerous methods that can be used to implement asset management, and many ways to tailor solutions to the decision-making culture of each agency. Organizations can start small, use existing data, and develop systems that integrate and build on existing capabilities.

The AASHTO asset management initiative provides an opportunity for states to coordinate the various aspects of their asset management activities, pool knowledge and resources to enhance needed tools, and generally to improve the way they do business. At the current time, the focus of the initiative is on physical infrastructure.

Several actions were suggested at the workshop to move forward on the asset management initiative:

- establish a Task Force to guide the asset management initiative;
- create a strategic plan for the initiative;
- develop an AASHTO guide for asset management;
- continue the executive workshop series to maintain the established forum for exchange of information;
- prepare an inventory of tools now available to use for asset management;
- develop and/or share case study reports;
- further define and coordinate the interactions between asset management, strategic planning, and quality improvement;
- develop a "Lead State" model to set the pace and implement new products;
- consider an AASHTO resolution on the asset management initiative; and
- continue the dialogue with industry.

observations on current practice

Some of the basic building blocks of asset management already exist. The key is to begin development and implementation of integration strategies to better use the current tools and data sources. Recognizing this, the executive workshop included a session dedicated to the evaluation of present practice. Key observations are summarized below.

Many Tools Already Available – Higher Level Systems and Integration Needed

There are many tools already available for managing specific types of assets. These include simple inventory and condition assessment tools, databases, pavement and bridge management systems, various types of information systems (accident type and location surveys, accounting systems, etc.), optimization methods, and others. Such tools are typically used at the "grass roots" level of an agency, with an emphasis on cost minimization.

Some integration occurs at the level of inventory and condition assessment, but it is generally recognized that a broader, higher-level view is needed. Many of the individual tools have not been completely implemented or used to their fullest potential. However, much of the critical data needed for asset management may already be available, particularly through pavement and bridge management systems. Relational databases can be used to link individual knowledge centers using common data definitions and requirements. Methodological enhancements are needed to create linkages between existing tools in order to support comparisons between competing choices, address interoperability issues, enable more comprehensive evaluation of all assets (pavements, bridges, and other) and alternatives, and generally support good asset management practice at all levels of the organization. Agencies should look at their current capabilities and build on existing opportunities.

Some New Tools Are Needed

Although many important asset management tools are already in some stage of use or development, tools for other functions are not yet broadly available. Condition rating and evaluation tools are readily available. Condition forecasting tools are in short supply. Tools that combine forecasts of cost and condition are almost non-existent. Methods for assigning value to assets, measuring return on investment, measuring resource capacity and user costs, quantifying benefits and opportunity costs, and evaluating investment trade-offs need to be developed.

....it is important to measure the right things, rather than to simply monitor what can be measured easily....

Better methods are needed for assessing the impacts of inadequate routine maintenance, quantifying the consequences of deferred capital maintenance, and communicating the importance and urgency of infrastructure investments to the public and elected officials.

Processes Needed To Evaluate Broader Impact of Trade-offs

Most agencies are already managing assets, but few have processes in place to systematically evaluate all the trade-offs that must be made. In general, the various types of assets (bridges, pavements, equipment, etc.) are managed separately, and there are few if any integrative processes to evaluate high level trade-offs. Currently, a common strategy is to focus decision-making on the "highway." This helps bring together consideration of pavements and bridges, but usually leaves out other modes and other types of assets. Executives agree that there is generally a need for more coordination —- both vertically within the agency, and horizontally between the different types of assets that compete for resources. Comprehensive asset management has utility as a way of educating Federal and State funding decision makers on the consequences of trade-offs and the need for funding flexibility.

New Metrics Needed to Support Performance-Based Strategic Decision-Making

Most agencies set explicit policies and goals and evaluate the success of their asset management strategies based on trends in facility condition. Executives agree that new performance-based measures and knowledge of associated economic implications are needed to support more strategic decision-making. Pavement and bridge management systems are good examples of tools that facilitate performance-based monitoring. Recent surveys of AASHTO member DOTs show that the principles incorporated in these systems could be applied effectively to asset management and other areas.

New performance-based measures should be consistent with the decision-making environment of each organization and the needs of customers. For example, legislators and the general public are sensitive to performance parameters such as:

- smoothness of ride and overall quality of service;
- timeliness of travel and overall mobility on the system;
- accessibility provided to all areas by the system; and
- availability of facilities (whether facilities are always open).

The change from measurement of condition to measurement of performance is consistent with the need for transportation agencies to be more customer-oriented. Performance-based measures will help decisions become more strategic, and less condition-driven.

Some Private Sector Practices Are Transferable

The basic goals and methodologies of preserving and operating physical infrastructure under more stringent fiscal constraints are similar for government organizations and the private sector. Many business concepts and principles can be transferred from the private to the public sector, recognizing that performance measures used in each sector differ. The public sector focuses on service and cost-effectiveness, while the private sector aims to maximize the value of assets or return on investment. Another significant difference is that transportation agencies have a public responsibility, and at present usually cannot abandon unprofitable facilities. Private sector practices which are most transferable to the public sector are:

- concept that "time is money" (time is of greater value in the private sector, due to the direct relationship to profit);
- profit motive (managed competition, innovative contracting methods, privatization);
- innovative procurement methods (not just low bid); and
- concept of product and value (not just cost).

"A one-size-fits-all approach will not work for asset management. Flexibility is essential."

—Darrel Rensink,
AASHTO President,
Director, Iowa DOT

Executive Leadership Is Critical

Visionary leadership and committed champions are important for promoting the benefits and ensuring successful implementation of new initiatives. Executive level leadership is especially critical for asset management, because the processes require a total systems perspective, and involve many programs throughout the agency.

The chief administrative officer of each agency should be the foremost proponent of asset management, championing the need for changes in normal practice and the benefits of newer technology. The executive leadership can communicate the importance of asset management to all levels of the agency, set credible goals, and ensure that they are achieved. Commitments of financial investments, the assignment of top staff to the effort, and other demonstrations of continuing, sustained support from the executive level are crucial for asset management initiatives to succeed. Without an asset management focus at the executive level, managers of individual assets will continue to attempt to optimize within smaller spheres of influence, resulting in global sub-optimization.

Top managers should stay closely attuned with an agency's ability to: (a) absorb new approaches and processes, and (b) implement asset management at a pace that challenges the organization but does not overwhelm it. Past successes can be better articulated, and used as examples of benefits of good asset management.

tools for asset management

Significant Role for Newer Technology

Newer technology makes the goals that asset management seeks to achieve feasible. Technology enables organizations to quickly and safely collect vast amounts of condition data, convert data into information, store and retrieve corporate data, information, and knowledge for use in decision-making, and compute numerous iterative calculations of funding scenarios.

Although clearly associated with recent developments in information technology, newer technology goes beyond hardware and software. It consists of new applications, new philosophies, improved processes, and enhanced procedures. Newer technology is the means whereby organizations accomplish their missions more efficiently and more effectively.

Current or emerging technologies that hold promise for asset management include:

- Multipurpose data collection vehicles with hand held computer collection equipment (for example, one pass, one van, all data);
- Geographic Information Systems and Global Positioning Systems tied to data collection processes;
- Robotics and remote-controlled equipment;
- Voice recognition systems;
- Data uploading capabilities;
- Relational databases;
- Electronic sensors (weather, traffic, etc.);
- Digital cameras (still and motion picture);
- Mobile communication devices (satellites, weather stations, cell phones, beepers, etc.);
- Remote sensing and nondestructive evaluation techniques;
- ITS technologies related to system performance; and
- Integrated video and traditional data.

Top management can facilitate the acceptance of technology by serving as role models in using the new capabilities. Pilot projects and demonstrations are particularly helpful means for staff to gain confidence that technological changes can make tasks easier and help accomplish goals.

Training programs and Internet clearinghouses are other mechanisms that can help an agency become more technologically friendly.

Choose a Development Approach

The key to development of asset management tools is to integrate and enhance existing capabilities and data sources. Asset management tools can be developed as customized "home grown" systems through a combination of in-house resources and outside consultant help, or through the acquisition and adaptation of generic "off the shelf" systems. Whichever approach is selected, the finished asset management tools should be as simple as possible, flexible, relatively inexpensive, and capable of providing needed information for decision-making at all levels.

Advantages of adopting generic tools versus developing "home grown" systems include: cost effectiveness, consistent data and information, consistent reporting, common data for resource allocation, and easier sharing of technical expertise and experience. Disadvantages of using generic tools are that they may not fit a particular decision-making environment, or may not easily accommodate other unique characteristics of a particular agency.

Whether tools start generic and get adapted, or are customized at the outset, depends on the needs and capabilities of the organization. As timing is critical, it may be better to start with a generic tool than not to start at all. Involvement at the research stage has rewarded many agencies (e.g., the SHRP initiative), while others have gotten bogged down in the development of customized tools. Numerous agencies have successfully observed how others approach a problem and used those experiences to assist in the development of their own solutions. In all cases, the use of well-tested tools and systems with established records of operational accomplishment is a sound approach. Irrespective of the development strategy selected, all levels of the organization should be involved throughout the process to assure that the finished product meets all defined needs.

Learn From Experience

Many important lessons have been learned from the development and use of existing tools. On the positive side, we now know that better data does lead to better decisions. Moreover, institutional knowledge is being documented and disseminated. This enables the setting of goals,

evaluation of accomplishments, and better use of resources leading to improved management. On the negative side, there are some serious limitations in existing tools. They do not address all business needs, do not support all levels of the organization, lack horizontal and vertical integration, and in some cases do not provide a balance between precision and relevancy in data and analysis. The need for good forecasting tools is critical, especially those that relate future expenditures to future condition.

Important lessons learned from building systems are: "be cautious about trying to do everything," and "seek a balance between usefulness and complexity." Some very complex systems (for example, a financial accounting system) can be extremely useful. However, needless, excessive, or misdirected complexity can limit system usefulness. Problems also arise from oversimplification. Other lessons include: identify system goals clearly, and provide input/output to proper levels of the organization; link systems to economic development; integrate information technology with solving of business concerns; address issues of organizational culture; recognize the need to treat uncertainty and risk; and ensure public acceptance of methods and data that make it easier to implement policy decisions based on the process. Realize that there can be benefits to developing broadly applicable systems. For example, local governments may use the basic elements of a more sophisticated system developed for a state agency. Individual tools and subsystems must be developed with an eye on meeting broader system goals.

The leadership approach to system development has an important influence. Champions are critical to drive development of needed tools forward, and support maintenance of the tools based on constantly updated requirements, crosscutting support, and knowledge of total resource needs. Top management should become involved at the very outset of planning development of a new tool, during the problem identification stage, and throughout all stages of system development, implementation, and operation. Demonstrations of sustained interest and support will help develop institutional focus and capacity throughout the organization. It is important for leadership to avoid over promising the benefits of the approach or minimizing the difficulties in making major changes to agency business practices.

Training Is Key

Training is key to familiarizing staff with new technology, making agencies technologically friendly, and sustaining continuous improvement. It seems appropriate that AASHTO/FHWA encourage and/or provide technological training, keep states aware of advances occurring in other states (perhaps through greater use of the Internet), and identify needed tools and assist in developing and deploying them.

AASHTO could create an information clearinghouse and establish a technology training program similar to its highly successful management improvement program. Training might be done through university-based training centers by building on National Highway Institute courses or by using other mechanisms. Training must be provided at a level consistent with the skills and background of the audience.

"Asset management is an opportunity to improve how we (the public sector transportation industry) do our business."

— Bob Templeton, Texas DOT

About Costs

The cost of acquiring asset management tools includes expenses for the following tasks: requirements analysis, procurement, design, development, testing, implementation, and more important, operation and maintenance. Expenses for integrating historical data, developing connectivity with outside systems, and changing organizational processes should also be considered. Some of the critical data needed for decision-making is likely already be available from pavement and bridge management systems, financial systems, sign inventories, photo logs, equipment inventories, etc. This data could be used more effectively, and may need to be supplemented with information from other sources. It is important to recognize that maintenance of a changing technology requires ongoing effort, and expenses for staff training, data updates, and maintenance and upgrades to the developed tools will be recurring.

Organizational justification for such costs requires that the process is top management directed, uses performance measures where possible, is mission driven, provides integration of enterprise wide system (systems perspective), has relationship to constituencies, offers ability to provide more and better analysis, and is a better tool/process to manage assets.

Support for investments in new asset management tools can be gained by building on past successes and improving the value of existing tools, and by relating new tools to performance measures, agency mission, customer benefits, increases in productivity, and enhancements in current decision support. Initial tasks can emphasize completion, enhancement, and integration of existing tools rather than new development.

the process of asset management

The asset management process is embedded in the programming and budgeting cycle. Although many organizations already practice some aspects of asset management, many current practices can be enhanced using the newer, more integrated asset management thinking, state-of-the-art technologies, and total systems thinking.

Data collection and analysis, performance modeling, decision-making and program development, implementation, monitoring, and feedback are major components of any asset management process. There are numerous ways to implement asset management, but most processes will have common attributes. A generic process is shown in Figure 1.

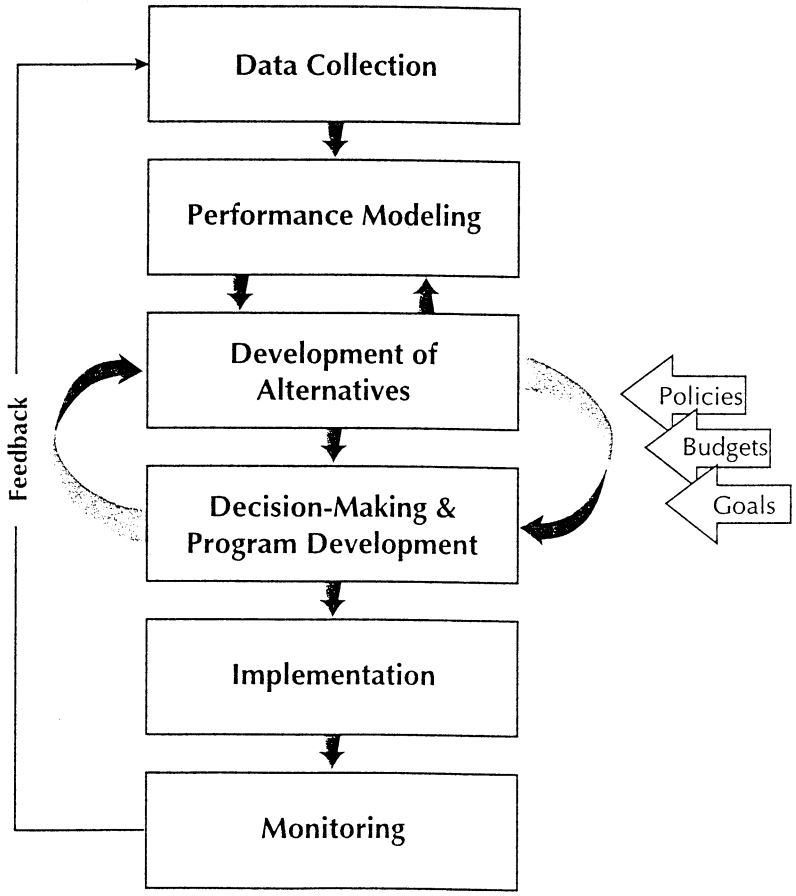

Figure 1. Generic Asset Management Process

Forces that influence the details of how asset management processes are implemented include: organizational culture, technology, staff skills, system usage, climate, demography, public opinion/value (including special interest groups), election cycle, fiscal situation, regional economics, and environmental regulations.

Asset management has a strategic component as well as aspects of day-to-day "plant management." Some key elements involved in the asset management process, as identified by workshop participants, include:

- ***Assets*** - there is a complex interconnectivity between different types of assets;
- ***Economics*** - many economic parameters could be evaluated in addition to costs (e.g., production value, user value, utilization, willingness to pay, economic impact/growth, social values, efficiency, and adverse impact, in addition to initial cost, life cycle cost, opportunity cost);
- ***Users of Information*** – information from the asset management process can be used in many ways and at different levels; potential users of information include analysts, customers, owners, stakeholders, and management; and
- ***Decisions*** - made at many levels within a continuous feedback/evaluation loop; address tradeoffs and competing choices, modal choices, choices between funding transportation versus other programs, as well as the asset management process itself ; must be made within constraints (revenue and others), and consistent with long range plans, policies, and goals.

Introduce Asset Management to the Organization

Asset management is an integral part of good management practice, and therefore should be introduced to and supported by all key units within the organization. All personnel should be aware of asset management and its contribution to the objectives of the agency. It should be clearly explained that implementation of asset management means continuously re-engineering agency processes to improve and integrate the systems and procedures already in place. Top management provides the systems perspective, and keeps the process on track with goals.

Acknowledge Challenges and Seek Gradual Improvement

Asset management can be implemented gradually by phasing in and integrating improvements in one program at a time (e.g., pavements, bridges, etc.) Over time, it will become possible to analyze trade-offs between various asset portfolios, policies, and methods, and use a common yardstick for optimizing network-level improvements and

investment strategies. An initial focus on a limited number of changes will enable the early achievement of several small successes, which will generate enthusiasm and ongoing support for longer term improvements.

Key challenges in the successful implementation of asset management can be identified as:

- Technical concerns of linking separate tools into a single system, integrating data, and developing and incorporating new methods and tools with existing processes;
- Balancing system complexity with expense and make development efforts result in useful products while avoiding the temptation to develop oversimplified (inexpensive) systems that are of limited usefulness;
- Making asset management fit within existing political and statutory situations;
- Coordinating newer asset management principles and practices with agency strategic goals;
- Overcoming the natural resistance to change, and any organizational structures that accentuate "ownership" of program areas, or discourage cooperative problem resolution; and
- Developing skills and process leadership.

Start With an Evaluation of Current Processes

As a starting point, current programming and budgeting processes could be revisited. Documentation of the current processes with flowcharts will provide a basis for functionally identifying initial process improvements. One approach is to focus on three levels of analysis: (a) assessment of unmet needs in the transportation system; (b) allocation of available budget resources in accordance with assessed needs; and (c) establishment of clear performance expectations consistent with budget allocations. Although some influences and decisions are outside direct agency control, a structured evaluation is likely to identify numerous opportunities where available technology can be used more effectively, and where newer asset management principles can be put in practice. The evaluation of current processes will help identify needs and provide a basis for prioritizing enhancement efforts.

Nurture the Human Resource

As with any important initiative, finding and keeping the right human resources to pursue and oversee implementation tasks can be a challenge. Asset management requires people who are systematic, integrative thinkers, who understand how data can be used in decision making, who have both engineering and economic analysis skills, and

"Asset management is an effective tool for communicating system needs to executive level decision-makers. The process must be continuous."

— Joseph Boardman,
NYSDOT Commissioner

who can develop systems. People with the skills to integrate disparate approaches to problem solving will extremely valuable contributors to the successful development of improved asset management processes and tools. Training in technical specialties will enhance natural talent and assist staff in coordinating their efforts, and consultants can be engaged to complement and supplement in-house skills, policy analysis capabilities, and resources.

Focus on Integration of Information

Proper integration of information systems is critical for successful, comprehensive asset management. A single database may not be practical, but if separate databases are developed, it is important to use compatible referencing systems so that information exchange can occur. The different systems need to have common keys so that data can be synchronized and easily translated from one system to another. Otherwise, information sharing can be cumbersome or even impossible. Relational databases and geographic information systems (GIS) are key technologies.

where do we go from here?

State Departments of Transportation are undergoing a period of major change that started about ten years ago. As citizen expectations for better use of and more accountability for public resources have increased, numerous initiatives have been put in place to help meet those expectations. Strategic Planning, Privatization, Outsourcing, Budgeting for Results, Total Quality, ITS and now Asset Management, are all initiatives that ultimately aim to help organizations provide cost-effective, high-quality transportation service.

Among these initiatives, asset management is somewhat unique in that some of the building blocks (both processes and tools) are already in place. The principles need to be communicated and put in practice throughout our organizations, and the pieces that we have need to be coordinated and integrated with other sound business practices and also be recognized as a system. Asset management provides a theme that helps build on existing achievements to improve the current way of doing business.

Today there are many exciting opportunities to improve our methods and approaches to asset management that we have not had in the past. These are mainly due to the technological advances in computers, software, geoposition by satellites, and so on. However, just as important are the circumstances we find our agencies in — fiscal crunches, downsizing, and at the same time continued growth in travel and high expectations of our customers. These are all ingredients that make us look for ways to manage better. Part of that is to look for new, productive, comprehensive approaches to managing transportation assets.

Participants at the executive workshop identified several actions collectively or individually needed to move forward on the asset management initiative.

Establish a Task Force

A tried and true method for tackling a problem is to appoint a task force of knowledgeable experts. As an organization, AASHTO members certainly have the experts among their staffs to tackle asset management

and to develop innovative approaches as well as a process and tools. Early work could focus on establishing basic guidelines to assist individual member agencies in their specific efforts to embrace and integrate the interactive methods of total asset management

Create a Strategic Plan

A strategic plan forces everyone to establish their vision, mission, goals and required actions. It also provides an excellent vehicle to introduce change in the most positive fashion. Many of the standing committees in AASHTO have developed, or are currently developing, strategic plans for their own activities. A strategic plan for asset management would, by it's nature, cut across literally all the current standing committees and might be an excellent means for AASHTO to proceed. A small number of experts from each area could lay out the broad vision for asset management as it pertains to member agencies and their ideas on mission, goals, and actions. This kind of broad blueprint would provide an excellent foundation for each member agency to assess where it stands in regard to asset management and to point the way toward work to be accomplished. The broad blueprint would provide an excellent national format for coordinating research on needed tools or processes and could also provide insights on deployment strategies. Our challenge will be to recognize the uniqueness of the individual states, as one-size system will not fit all states.

Develop an AASHTO Guide

As a national organization, AASHTO has played an important role in setting standards and developing guides for numerous aspects of transportation system work. While individual members do not have to adopt these standards and guidelines, their existence has provided an excellent reference point for each member agency to consider when developing their own programs.

Since there are few source documents that now exist on asset management, a first effort which pools current knowledge, outlines approaches, and describes a basic process in the form of a guide, would make an excellent beginning. A guide could also provide a reference listing of the current tools available for asset management along with a brief description

Continue the Executive Workshop Series

One year ago the first executive workshop on asset management brought into sharp focus the need for AASHTO members to bring more comprehensive management to bear on our vast transportation system. Until that first workshop few thought about the value of the system and all its attributes. During the second workshop, current

methods of management were discussed and, not surprisingly, much of that management is by individual component (pavement, bridges, etc.). Ideas for comprehensive approaches, new tools, and "what if" strategy analysis were discussed. It is critical to keep this dialogue alive, and one excellent way is by the continuation of the executive workshop series.

Prepare an Inventory of Tools Now Available

During the course of the workshop, speakers described current tools, both simple and complex. In the course of breakout discussions, many participants identified tools which they were familiar with. At the present time, there is no complete inventory of existing tools or a description of their utility or weaknesses. An inventory of tools would provide agencies embarking on an asset management program, a list of what is available, and point the way for what development work may be required for the particular program that they envision. In addition, documentation and sharing of case studies is a valuable way of sharing this information.

Further Define and Coordinate Interactions Between Asset Management, Strategic Planning and Quality Improvement

Each of the disparate efforts — strategic planning, quality improvements, etc. — have been developed to address specific problems after some event or need identification. Asset management, as we now envision it, provides a wide umbrella under which all these efforts fit.

Like the planning process of the 1960's, it provides framework or process under which all the parts fit. Now that we have a mature transportation system, we need a more comprehensive framework by which we can evaluate strategic trade-offs in terms of investment, new technology, new materials, and evaluation of quality efforts.

Develop a "Lead State" Model

One of the greatest challenge any agency faces, is how to deploy new research products, methods or processes. SHRP is an excellent example of an intensive research effort which developed new products and methods for high payoff areas in transportation. However, until the "lead state" approach to deployment was established by AASHTO, with full FHWA support, the pace of the new product and methodology utilization was slow. If asset management is to be deployed in timely fashion, a "model" approach is needed to help member agencies. The documentation and sharing of case studies by "lead states" will lead to an accelerated deployment. The benefits are too great to leave it to an unplanned or haphazard approach.

Consider an AASHTO Resolution

Based on the consensus of participants at this executive workshop, asset management offers an excellent means of providing better and more cost-effective decision making in the management of our transportation assets. One possible step, which would highlight the importance of asset management, would be a joint resolution urging all member states to work toward its implementation and to cooperate in the development of tools and processes

The above listing of actions to develop and deploy asset management cover a wide range of possibilities. Several have similarities and others could be used in combination by AASHTO and FHWA leadership in devising strategies at the national level. Certainly using NCHRP would appear to be an effective means of integrating development efforts.

AASHTO, under this scenario, could take the lead as a clearinghouse to keep agencies abreast of progress, success stories and problems. New tools may be introduced as AASHTOWare products. Finally, the possibility to adapt ideas from or partner with industry should be considered.

acknowledgements

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